WILDLIFE HABITAT MANAGEMENT INSTITUTE
USDA, Natural Resources Conservation Service
Volume 1, No. 2

Insight

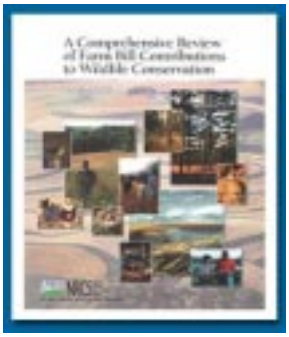
Message from the Director

L. Pete Heard

Technology transfer from the Institute to the field and others has increased steadily over the past several months. Among the items released is a comprehensive review of farm bill contributions to wildlife conservation which not only documents the value of conservation programs for fish and wildlife but also informs Congress of what public dollars invested in these programs have bought (see next article).

Among the projects the Institute is supporting is an evaluation of the econmic importance of wildlife associated with conservation activities on private lands. The results of this effort, which is being coordinated by the Wildlife Management Institute (WMI), will have applicability to ecotourism. Foremost in Institute activity has been determing and developing ways to better equip our employees with technical knowledge of fish and wildlife habitat management. This newsletter highlights some of the exciting activities that are providing the best technology available to our people.

WHMI releases comprehensive review of farm bill contributions to wildlife conservation



At the request of Director Heard, a comprehensive review of the scientific literature was undertaken by WHMI staff and collaborating scientists to determine wildlife responses to programs established under the conservation title of the 1985 Food Security Act as amended in 1990 and 1996 (Farm Bill). The resulting document entitled, *"A comprehensive review of Farm Bill contributions to wildlife conservation, 1985-2000*," was released in December 2000. In the report, literature was annotated and summaries of wildlife responses were provided for the Conservation Reserve Program (CRP), Wetlands Reserve Program (WRP), Wildlife Habitat Incentives Program (WHIP) and Environmental Quality Incentives Program (EQIP). The report recognized that Farm Bill conservation programs were created to serve many purposes. Foremost among these purposes was to enable America's farmers and ranchers to be better stewards of their lands. In general, wildlife responded positively to improvements in land stewardship, particularly when the needs of wildlife were considered in conservation planning and implementation. Whereas authors acknowledged that their understanding of wildlife responses to Farm Bill

conservation programs was still incomplete, they concluded that these programs were making significant contributions towards conservation of the Nation's fish and wildlife resources.

The document can be viewed and downloaded from WHMI's website www.ms.nrcs.usda.gov/whmi. Staff contact: William Hohman.

Understanding the Landscape Training Course Under Development

This training course, designed to help resource planners and support staff understand the connectivity of landscape processes and apply resource management principles more holistically, is on target and taking shape. The training includes modules on ecological processes such as those associated with biotic communities, nutrient dynamics, energy flow, soils, and hydrology. In addition, the course will feature 5 case studies from around the country. The first of these was recently filmed in southeastern Arizona/ southwestern New Mexico, in what is locally referred to as the Malpai Borderlands. The course will be completed this winter and be offered by NEDC and made available to State Offices next spring. For additional information, contact Wendell Gilgert or Kathryn Staley.

Wildlife PowerPoint Presentations on CD

The WHMI recently distributed a CD-ROM to the states containing several PowerPoint presentations on fish and wildlife related topics. These presentations are intended for use by state and field staff in conducting internal training as well as landowner workshops and similar activities. Presentation topics include Managing CRP Land for Small Game (originally developed by Missouri Department of Conservation and Missouri NRCS biologists), Conservation Tillage and Wildlife, and Wildlife Considerations (a presentation developed by WHMI to accompany the Core4 conservation practices initiative). Staff contact: Charlie Rewa.

Buffers Shortcourse Held at Mississippi State University

In May, the Watershed Science Institute (WSSI) and WHMI sponsored a shortcourse entitled "Buffer Practices and Wildlife in Southeastern Agricultural Systems" at Mississippi State University. The shortcourse was part of a project that is being funded by the Institutes to evaluate the effects of buffer technology on wildlife habitat, weed propagation, pest and beneficial insects, and producer costs. NRCS biologists, agronomists, resource conservationists, agricultural engineers, landscape architects, foresters, district conservationists, and soil conservationists from 10 states attended the training. There were also participants from state wildlife agencies, Farm Service Agency, U.S. Fish and Wildlife Service, Cooperative Extension Service, and private organizations.

Dr. Wes Burger led the effort and attracted an impressive group of speakers from Mississippi State and around the country who are doing related work. They included wildlife scientists from North Carolina State University, Iowa State University, University of Georgia, and Tall Timbers Research Station. In addition there were speakers from the Agricultural Research Service, the Whitten Plant Materials Center, and Monsanto Corporation.

Following the presentations at MSU, the participants made a field visit to the Bryan Farms study site in Clay County, MS. Van Williams, District Conservationist at the West Point Field Office, hosted the visit. The workshop ended with a great meal at the headquarters of the Black Prairie Wildlife Management Area. The Mississippi Department of Wildlife, Fisheries and Parks, a cooperator in the study, owns the area and is using the buffer practices in its management plan. Staff contact: Ed Hackett.

Left to Right, Jim Lewis, State Biologist, SC; Louis Justice, State Biologist, GA; Tony Thompson, SE District Conservationist, MS; Vic Simpson, Regional Technologist Spec.; and MIke Anderson, National Biologist. Photo by Ed Hackett.

Fieldwork begun to assess plant, invertebrate, and bird responses to spring and fall disking of WRP and EWRP floodplain easements in the Iowa River corridor

Riparian areas in the Mississippi River Basin historically have provided habitat for millions of wetland-associated and forest birds, especially during the spring and fall migration periods. To restore vital riparian functions, thousands of acres of floodplain easements have been established under the Conservation Reserve Enhancement Program (CREP), Wetland Reserve Program (WRP) and Emergency Wetland Reserve Program (EWRP) in the Upper Mississippi River Basin. Current management of floodplain easements ranges widely from passive management to active restoration of floodplain hydrology and reestablishment of historic woody and herbaceous vegetation. In support of NRCS-IA and its conservation partners, WHMI engaged Iowa State University scientists to evaluate wildlife responses to management practices in the Iowa River corridor. The specific objective of this evaluation is to assess the effects of spring and fall disking on plants, invertebrates, and birds. In addition to addressing an important information need, this project will give the agency's conservation efforts greater visibility, serve to strengthen partnerships, and facilitate the exchange of information among natural resource conservation interests in the region.

The graduate student selected for the project enrolled at ISU in fall 2000. Under the advisement of Drs. Jim Dinsmore and Bill Hohman, the graduate student successfully completed his first year of coursework and prepared a detailed research proposal for his graduate committee in spring 2001. Fieldwork consisting of bird surveys, and plant and invertebrate sampling began in May and will continue though August. A second field season will be conducted next spring/summer with an anticipated completion date of summer 2003. Information generated will be disseminated in annual progress reports to cooperators, presentations at technical and nontechnical meetings, and publication of agency technical notes and peer-reviewed scientific papers. Support for this study has been received from USGS/BRD, Iowa DNR, USFWS and the National Fish and Wildlife Foundation. Staff contact: William Hohman.

Wildlife Habitat Council Partnership Update

The partnership between the Wildlife Habitat Council and the Wildlife Habitat Management Institute continues to help address the fish and wildlife habitat related technical needs of NRCS field staff and WHC corporate members. The list of available Wildlife Habitat Management Leaflets developed through the partnership continues to expand. These leaflets provide basic life history and management strategies for a variety of common fish and wildlife species as well as management approaches to species groups or specific communities (e.g., butterflies, grassland birds, or forest

wildlife). Leaflets are developed with the assistance of or are reviewed by technical experts from academia, management agencies and private conservation groups from around the country. There are currently seventeen leaflets available for downloading on the WHMI web site, with thirteen additional leaflets in development. See the WHMI website for a list of available and planned fish and wildlife habitat management leaflets (www.ms.usda.gov/whmi). Staff contact: Charlie Rewa.

WHMI and Iowa State University assist NRCS-MN state staff and conservation partners to evaluate wildlife responses to conservation filter strips in the Minnesota River Watershed CREP

Eligible for enrollment under the continuous signup Conservation Reserve Program (CRP), filter strips are being actively promoted in midwestern states under the USDA buffer initiative that seeks to establish 2 million miles of conservation buffers by 2002. In support of conservation partners in the Midwest seeking to enhance wildlife benefits of conservation buffers, WHMI engaged Iowa State University scientist, Dr. Diane Debinski, to (1) document use of CRP filter strips by nontraditional wildlife species and (2) evaluate how wildlife use is influenced by buffer characteristics.

Early agricultural development resulted in the elimination of most of the prairie and other native habitats that once dominated Midwestern landscapes. More recently, intensification of rowcrop agriculture has further reduced other non-native grasslands (e.g., pastures, hayfields). Consequently, birds and many other species of grassland-associated wildlife have experienced long-term and widespread population declines. Butterflies are important

indicators of ecosystem function. Some species are tightly linked to one species of host plant while others are much more general in their requirements. Because butterflies are diverse in species number and relatively easily identified in the field, species distribution and abundance data can be easily collected and used to evaluate the condition of a grassland habitat. In a previous study, Debinski found that creation of roadside buffer habitat could have significant short-term effects on local butterfly communities. However, she also found there was high mortality in butterflies located in plantings near a road. She anticipates that filter strips should have positive effects on butterfly communities without the mortality costs associated with roadway locations. Additionally, if filter strips do in fact provide habitat for rare butterfly species, they may also serve as corridors, reconnecting the highly fragmented midwestern prairies. This value of buffer strips as corridors could have a significant effect on pollination of rare plants in the prairie community. However, whether filter strips represent a boon to grassland wildlife or potential ecological traps needs to be scrutinized. There could be high predation pressure on butterflies located in such narrow strip habitats. The proposed evaluation will add significantly to our understanding of wildlife use of filter strips and will provide a database from which to make informed management recommendations for future filter strip design, thus enhancing the potential for this land-use practice to help in the conservation of grassland wildlife communities.

This study will be conducted in the Minnesota River watershed (CREP project area) and likely will focus on butterfly responses to planting mixture, buffer width, disturbances (e.g., fire, mowing, grazing) and landscape features. A companion study looking at bird responses to buffer characteristics also is anticipated. Staff contact: William Hohman.

Northeast Grassland Bird Study Initiated

The WHMI has entered into an agreement with the U.S. Fish and Wildlife Service to facilitate an evaluation of grassland breeding bird response to various grassland management practices in the Northeast. Though the project is being conducted primarily on twelve National Wildlife Refuges, results are expected to provide insight on managing private lands for grassland birds in the Northeast. USGS scientists from the Patuxent Wildlife Research Center in Laurel, Maryland are also assisting with project design and statistical analyses. The project is expected to begin generating information useful to NRCS field staff within the three-year project time frame. Staff contact: Charlie Rewa.

New Agreement with University of Georgia

The WHMI recently completed a new agreement with the Warnell School of Forest Resources at the University of Georgia to develop technical information for NRCS to improve wildlife planning on private lands. One of the tasks within the agreement, will look at the value of lands enrolled in the Longleaf Pine Conservation Priority Area (CPA) of the Conservation Reserve Program (CRP) to birds associated with early successional habitats. The second portion of the agreement will be a small contribution to a much larger study that is investigating the landscape context of bottomland hardwood reforestation, including WRP, on bird demographics in the lower Mississippi alluvial valley.

Dr. John Carroll will lead the longleaf pine CPA portion of the study, with most of the study sites located in Georgia. Dr. Robert Cooper will lead the bottomland hardwood portion. Dr. Cooper is co-principal investigator with Dr. Dan Twedt (USGS-Patuxent Wildlife Research Center) on this landscape scale study.

The Georgia State Office of NRCS will help provide direction to the LLP portion of the study and an agreement among the Louisiana State Office, USGS, USFWS, and UGA in the works to allow investigators access (with landowner permission) to WRP tracts. Staff contact: Ed Hackett.

Training and Technical Assistance

Wendell Gilgert provided training to Alaska Field Office Staff on integrating wildlife considerations into CORE 4 practices in a training session held in Anchorage, Alaska in October.

In March, Wendell provided training to Northern California Field Staff on the inclusion of wildlife habitat needs in the development of a Ranch Conservation Plan and the companion grazing management plan.

While in the Hawaiian Islands to attend the meeting of the Wildlife Committee of the Society for Range Management at their Annual Conference, Wendell provided technical

assistance to Terrell Kelley on fine tuning the Hawaii Stream Visual Assessment Protocol (SVAP) on Kauai. He also worked with Field Office personnel, and representatives of Ducks Unlimited and the US Fish and Wildlife Service to assess restoration potential of wetlands on properties that are going out of Sugar Cane production. The properties have tremendous potential to provide wetland habitat for Hawaii's endemic endangered water birds, the Hawaiian Stilt, Hawaiian Moorhen, Koloa Duck, and the Hawaiian Coot.

Kathryn Staley also attended the SRM meeting with Wendell and WHMI Director Pete Heard, after which she spent 5 days with Terrell Kelley, Hawaii State Biologist, to assist with finalizing technical products and WHIP project evaluation. She participated in the meeting of the Hawaii Stream Bioassessment Working Group and provided a "mainlander's" perspective of the SVAP protocol, under what conditions it should be used, and when a more detailed and quantitative aquatic assessment would be needed. Kathryn spent one day on the island of Kauai with District Conservationist Ron Peyton to evaluate progress made on WHIP projects begun over the past couple of years. The conservation objectives of these WHIP projects include eradication of invasive non-native plant species, protection of extant native forest communities, and partial restoration of native plant communities important for native wildlife species, especially birds. The encroachment of non-native plant species on native forest communities in Kauai is severe. There are remnant native forest communities interspersed with non-native plants. This has fragmented critical habitat for native wildlife species. Peyton's strategy has been to focus on those areas where encroachment of invasive species is limited to residential sites and intact forest is relatively contiguous beyond these fringes. These areas characterized by large stands of non-native species are generally around residential inholdings where landscaping with non-native species has been on-going for over 50 years. Removal of invasive plants along these fringes, and replacement with native plants suitable to the sites will hopefully buffer the intact native forest from further invasion, in essence protecting it and the habitat it offers. Finally, Kathryn assisted Terrell and an Earth Team Volunteer on Oahu in a field test of the recently developed Riparian Forest Buffer Specifications Sheet. Through this test, we identified several physical and biological parameters that needed to be added to the spec in order to better describe the existing condition and identify the most attainable desired condition.

Stream in Oahu, Hawaii, photo by Kathryn Staley.

Other Products

WHMI staff is working collaboratively with a number of other groups, organizations and NRCS field personnel to develop information pamphlets and brochures for distribution to landowners. The second edition of *Best Management Practices for Short Grass Prairie Birds,* a product of the Rocky Mountain Bird Observatory is now out and available.

We are working closely with Bat Conservation International to produce a brochure on *Bats and Integrated Pest Management* that will be distributed to all field offices nationwide.

The Western Biologist Consortium is working with the Western Working Group of Partners in Flight to produce a brochure on the removal of tamarisk and Russian olive in the western habitats.

University Activities

Wendell Gilgert taught the Wildlife Field Studies class for the Fishery and Wildlife Biology Department for the University of Colorado during the spring semester. The course, which has several classroom sessions culminated with a nine-day, 2800-mile trip through Wyoming, Montana, Utah and Colorado to visit with wildlife professionals and habitat managers on Federal, State, private, corporate, and Tribal

lands. The class of 24 junior and senior wildlife majors sighted 184 species of wildlife. The average number of new species sighted by an individual student was 29. Some of the more notable species were grizzly bear, gray wolf, fluvial arctic grayling, bull trout, Barrow's goldeneye, trumpeter swans, Wilson's phalaropes, rose-breasted grosbeak, silver-haired bat, and at least 3,000 pronghorn antelope. The students saw a spectrum of wildlife habitat management tools applied to the land including prescribed fire, mechanical vegetative treatment, herbicide treatment, grazing management, artificial feeding, and conservation easements.

Meeting and Society Participation

Pete Heard, Kathryn Staley, and Wendell Gilgert participated in the Society for Range Management's (SRM) annual conference held in Kona, Hawaii in February. Pete and Wendell agreed to chair and organize a joint symposium between the SRM and The Wildlife Society on "*The other grazers (non-hoofed)"* at the SRM annual meeting to be held in Casper, Wyoming in February 2003.

Wendell has agreed to organize a Private Lands Conservation session for the 3rd International Partners in Flight Conference to be held in March of 2002 in Asilomar, California. It will offer a great opportunity to spotlight efforts that involve NRCS, Conservation Districts, and our myriad partners who are working to create, enhance, restore and manage habitats that benefit neo-tropical migratory birds.

International Conference on Large Wood in World Rivers

WHMI staff fisheries biologist Kathryn Staley co-coordinated this conference, held on the campus of Oregon State University, October 23-27, 2000. Over 30 plenary presentations, 55 contributed papers, and 44 posters focused on research and research applications of the ecology and management of wood in rivers. This conference pulled together researchers from all over the world to present and synthesize research findings worldwide. Kathryn is now co-editing the conference proceedings to be published in 2002, a bibliography of wood in rivers research papers relevant to river restoration, and a manager's guide to retaining wood in rivers for aquatic habitat. These post-conference products should help land managers restore and improve rivers and watersheds where wood is an important component of ecological processes. Abstracts of all plenary talks, contributed papers and posters are available in hardcopy or CD. For more information, visit the conference website at http://riverwood.orst.edu. Staff contact: Kathryn Staley.

Willamette River, photo by Kathryn Staley

Aquatic Habitat-related Conservation Practice Standards

Under the leadership of Kathryn Staley, two interdisciplinary teams completed the revision of Code 395 – Stream Habitat Management, and the development of Code 396 — Fish Passage. These two Conservation Practice Standards are available on the NRCS website: http://www.ftw.nrcs.usda.gov/nhcp_2.html. Staff contact: Kathryn Staley.

Willamette River Restoration Project

Institute fish biologist Kathryn Staley is collaborating with local RC & D coordinator Karen Strohmeyer and aquatic scientists at OSU to evaluate floodplain and riparian restoration actions being taken by private landowners who farm lands adjacent to the Willamette River. Research objectives include evaluating the effect of restoration and conservation actions implemented in riparian areas and floodplains on riparian function and aquatic species

habitats, especially salmon habitat. Parameters to be evaluated include short and long-term response of restoration actions on (a) floodplain and riparian conditions, (b) riverine conditions, (c) native fish populations, (d) flood attenuation, and (e) cropland protection. Initial data collection will begin this summer. Staff contact: Kathryn Staley.

Wildlife Habitat Management Institute

100 Webster Circle, Suite 3
Madison, MS 39110
Voice 601.607.3131
Fax 601.607.3139
whmi@ms.nrcs.usda.gov
www.ms.nrcs.usda.gov/whmi

Staff

- L. Pete Heard, Director; Ed Hackett, Wildlife Biologist; Nancy Magee, Program Assistant, 100 Webster Circle, Suite 3, Madison, MS 39110
- Wendell Gilgert, Dept. of Fisheries and Wildife Biology, Colorado State University, Ft. Collins, CO 80523
- Bill Hohman, Dept. of Animal Ecology, Iowa State University, 124 Science II, Ames, IA 50011
- Charlie Rewa, Patuxent Wildlife Research Center, 11410 American Holly Drive, Laurel, MD 20708-4015
- Kathryn Staley, Dept. of Fisheries and Wildlife, 104 Nash Hall, Oregon State University, Corvallis, OR 97331